

SPECIFICATION

Page 1, between lines 1 and 2, please add the following:

-- SPECIFICATION

Cross Reference to Related Application

This application is a continuation of Ser. No. 09/311,197  
filed 12 May 1999 (U.S. Patent 6,629,570) and based upon U.K.  
application 9810321.1b of 15 May 1998 under the International  
Convention. - -.

Page 5, the paragraph containing lines 9 to 15, rewrite as follows:

-- Referring to figure 1 and 2, for the first embodiment, an electrical motor 21 of the type used for electric submersible pumps is used. This electric motor is connected to a planetary gearbox 27 to reduce the output shaft speed to suit the drilling environment. Referring to figure 4, the motor is controlled from surface by a laptop computer (not here shown) connected to a variable speed drive. A command and control software package interrogates the drive to acquire and record real-time drilling data from the motor. A cable 24 for the motor extends through the flexible tubing 23 (FIG. 2). -- .

Page 11, the paragraph containing lines 11 to 19, rewrite to read as follows:

-- Referring to figures FIGS. 3, 5 and 6, the motor 31 includes rotor elements 38, stator elements 39 and a hollow shaft 34 which permits the passage therethrough of fluid from the inside of the coiled tubing to the drill bit 32. Mud is pumped from the surface down the inside of the coiled tubing 33 through the bore 35 of the hollow shaft 34 ~~[[shaft]]~~ and to the bit 32 to wash the cuttings away from the bit and back along the well being cut on the outside of the motor and continuous coiled tubing. A liner tube ~~[[37]]~~ 37a running through the hollow shaft ensures that the motor components are kept free of contamination, and that the need for seals within the motor is reduced.

Page 12, the paragraph containing lines 9 to 17, rewrite as follows:

- - As shown in figure 4 control means 41 comprising a digital estimator and a motor simulator are provided for controlling the motor 31. Voltage and current input means 42 are provided to determine the speed and torque of the drill bit to the control means 41 which are preferably provided by direct electrical measurements of the motor. Preferably formation type input means are also provided to the control means from the rock type sensor on sensor tube 37. Also drill bit type input means are provided to input the type of drill bit being used corresponding to the particular drilling operation. Thus power and data is provided to the motor by means fo the cable 43. - -.

Page 13, the paragraph containing lines 1 to 5, rewrite as follows:  
--components. The electric motor is directly controlled by a  
bottom hole computer via link 69, as well as being influenced by  
the downhole sensors by link 67 (which could also be fed firstly to  
the bottom hole computer). The bottom hole computer, and some of  
the downhole sensors, also monitor the motor's performance, that  
is, the data transfer is bidirectional through the links 64a - 64e  
and 65 (FIG. 7).- -.

Page 16, line 22 rewrite to read as follows:

-- Figure 18 shows the bottom hole assembly 94 being  
deployed from a vessel 90. - -.